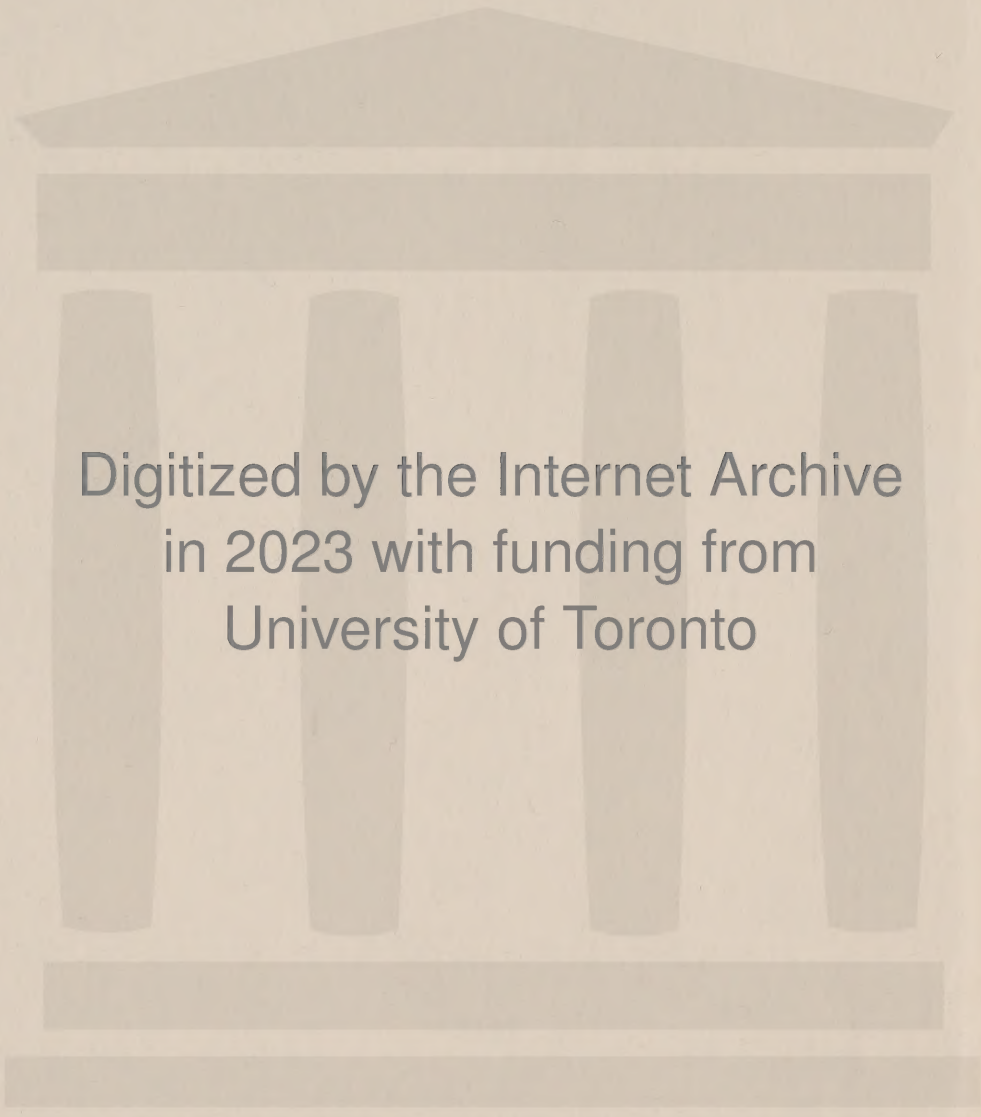

CANADA
DEPARTMENT OF MINES
MINES BRANCH

HON. W. TEMPLEMAN, MINISTER; A. P. LOW, LL.D., DEPUTY MINISTER;
EUGENE HAANEL, PH.D., DIRECTOR.

THE PRODUCTION OF IRON AND STEEL IN CANADA

During the Calendar Year

1909

BY

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ADVANCE CHAPTER OF THE ANNUAL REPORT ON THE MINERAL PRODUCTION OF CANADA DURING THE CALENDAR YEAR, 1909.

(Tons used throughout this report are short tons of 2,000 pounds, except where otherwise stated.)

IRON AND STEEL.

INTRODUCTORY.

The iron and steel industry in Canada in 1909 shows a very satisfactory and steady growth as compared with previous years.

There was a larger production of iron ore than in 1908; an increased output of pig iron from Canadian blast furnaces and a larger production of steel ingots and castings; while the imports of pig iron and of iron and steel goods more or less highly manufactured were greatly diminished.

Although iron ores are of wide occurrence throughout Canada, being found practically in every province, the development of these resources has not kept pace with the growth of our iron metallurgical industries.

About 17 per cent only of the iron ore used in Canadian furnaces during 1909 was of domestic origin. Much of the coke and limestone was also imported, so that our iron industries are now, and have been for a number of years, largely dependent on imported raw materials.

The total production of iron ore in Canada to the end of 1909 has probably only slightly exceeded 5,000,000 tons, while our present rate of production varies from 300,000 to 400,000 tons per annum.

There were shipped from Newfoundland in 1909 about 1,110,049 tons of ore, of which about 697,068 tons were sent to Canada for use at Sydney. Since 1896, or during the past fourteen years, we have imported 7,521,086 tons of iron ore, chiefly from Newfoundland and the south shore of Lake Superior. As against this we have exported during the same period about 1,556,996 tons, chiefly to the United States.

Developments are in progress, however, which may in the near future furnish a much larger supply of domestic ore. Active operations are in progress at Torbrook, N.S., and extensive preparations being made to ship from the large magnetite deposits near Bathurst, N.B. The Moose Mountain mine, north of Sudbury, of which much has been expected, shipped an important tonnage during 1909, and development work is being continued. Operations have been started on a deposit twenty-four miles east of Port Arthur, the first in this district, and some initial shipments made. A magnetometric survey was made of the old Bristol mine, Pontiac county, Quebec, by an officer of the Mines Branch, resulting in the discovery of the probable existence of a considerable ore body apparently not previously known.

The production of pig iron and steel is still confined to the eastern half of Canada, chiefly in the Provinces of Ontario and Nova Scotia. There are sixteen

completed blast furnaces, with a total daily capacity of about 2,735 tons. Of the sixteen, twelve have a daily capacity of 100 tons or over. The production of pig iron and steel in 1909 was the highest year's production yet turned out by Canadian furnaces. The bounty which has been paid on iron and steel production ceases at the end of 1910, although provision is still made for the payment of bounty on pig iron produced by electric process to the end of 1912.

The difficulties which had arisen between the Dominion Coal Company and the Dominion Iron and Steel Company, respecting the supply of coal to the latter, and which had to a considerable extent interfered with the Steel Company's output, were satisfactorily settled in the early part of the year, enabling the Steel Company to bring its production again up to normal and provide extensions of its plant, which will include an additional furnace, new coke ovens, and a finishing mill. Towards the close of the year, negotiations were in progress looking to the amalgamation of the two companies, which have since been successfully concluded. A new steel plant was being built at Londonderry, while various additions and extensions to plants were being made in Ontario.

The Algoma Steel Company has made arrangements for the construction of an additional blast furnace of 400 tons capacity, and the erection of a merchant mill for the manufacture of structural steel. Arrangements were also being made for the construction of by-product coke ovens sufficient to supply the steel plant with all the coke it will need.

A summary of the chief statistics of the production of iron ore, pig iron and steel is given hereunder, while many details will be found in subsequent pages.

Statistical Summary of Iron Ore, and Iron and Steel Production, 1907-8-9.

Material.	1907.	1908.	1909.
	Short Tons.	Short Tons.	Short Tons.
Iron ore shipped	312,856	238,082	268,043
Canadian iron ore charged to furnaces	244,104	209,266	257,502
Imported " "	1,117,260	1,051,445	1,235,000
Pig iron made	651,962	630,835	757,162
Steel ingots and castings made	706,982	588,763	754,719
Finished rolled iron and steel products made (a)	672,200	566,099	.....
Canadian coke charged to iron furnaces	521,068	492,076	412,016
Imported " "	327,082	325,670	507,255
Pig iron imported	(b) 150,157	(c) 212,290	(c) 58,591
Iron and steel goods imported	(b) 632,868	(c) 866,710	(c) 487,003

(a) Statistics collected and published by American Iron and Steel Association.
(b) Nine months ending March, 1907.
(c) Twelve months ending March.

{ The figures given do not show the total quantities of iron and steel goods imported, as in many cases the quantities are not given in the trade returns.

IRON ORE.

The total shipments of iron ore from mines in Canada in 1909 were 268,043 tons, valued at $659,316 at the shipping point; as compared with 238,082 tons, valued at $568,189, in 1908, and 312,856 tons, valued at $666,941, in 1907. By provinces, the production during the past three years was as follows:—

IRON.—TABLE 1.

Production of Iron Ore by Provinces, 1907-8-9.

Provinces.	1907.		1908.		1909.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.
		$		$		$
Nova Scotia	89,839	137,161	11,802	17,620	.....	.....
Quebec	12,748	34,956	10,103	22,094	4,150	5,508
Ontario	207,769	488,324	216,177	528,475	263,893	653,808
British Columbia	2,500	6,500	.....	.....	.....	.....
	312,856	666,941	238,082	568,189	268,043	659,316

The production during 1908 and 1909, classified as magnetite, hematites (including brown ores), carbonates, and bog ores, was as follows:—

IRON.—TABLE 2.

Classified Production of Iron Ore, 1908-9.

Character of Ore.	1908.			1909.		
	Short Tons.	Value.	Per Ton.	Short Tons.	Value.	Per Ton.
		$	$ cts.		$	$ cts.
Magnetite	49,946	124,534	2 49	74,240	162,280	2 19
Hematite	173,164	416,127	2 40	190,473	492,348	2 58
Carbonate	4,869	5,434	1 12	.....	.....	.....
Bog	10,103	22,094	2 19	3,330	4,688	1 41
	238,082	568,189	2 39	268,043	659,316	2 46

A record of the production of iron ore in past years is shown in Tables 3 and 4:—

IRON.—TABLE 3.

Production of Iron Ore by Provinces, 1886-1909.

Calendar Year.	Nova Scotia.	Quebec.	Ontario.	British Columbia.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.
1886	44,388	.....	16,032	3,941	64,361
1887	43,532	13,404	16,598	2,796	76,330
1888	42,611	10,710	16,894	8,372	78,587
1889	54,161	14,533	.....	15,487	84,181
1890	49,206	22,305	.....	.....	76,511
1891	53,649	14,380	.....	950	68,979
1892	78,258	22,690	.....	2,300	103,248
1893	102,201	22,076	.....	1,325	125,602
1894	89,379	19,492	.....	1,120	109,991
1895	83,792	17,783	.....	1,222	102,797
1896	58,810	17,630	15,270	196	91,906
1897	23,400	22,436	2,770	2,099	50,705
1898	19,079	17,873	21,111	280	58,343
1899	28,000	19,420	25,126	2,071	74,617
1900	18,940	19,000	82,950	1,110	122,000
1901	18,619	15,489	272,538	7,000	313,646
1902	16,172	18,524	359,288	10,019	404,003
1903	40,335	12,035	209,634	2,290	264,294
1904	61,293	16,152	141,601	.....	219,046
1905	84,952	12,681	193,464	.....	291,097
1906	97,820	9,933	141,078	.....	248,831
1907	89,839	12,748	207,769	2,500	312,856
1908	11,802	10,103	216,177	.....	238,082
1909	.....	4,150	263,893	.....	268,043

IRON.—TABLE 4.

Production of Iron Ore in Nova Scotia, 1876-1885.

Calendar Year.	Tons.	Calendar Year.	Tons.
1876	15,274	1881	39,843
1877	16,879	1882	42,135
1878	36,600	1883	52,410
1879	29,889	1884	54,885
1880	51,193	1885	48,129

Nova Scotia.—No iron ore is reported as shipped from mines in this Province during 1909. The furnaces at Sydney and North Sydney received their supplies of ore from Newfoundland chiefly, while the Londonderry furnace, which is usually run on local ores, was out of commission throughout the year.

The Canada Iron Corporation, Limited, continued to develop their properties at Torbrook, and a quantity of ore was taken out, although none was shipped.

A railway spur is being built from the mines to connect with the Halifax and Southwestern Railway track at Nictaux, and ore shipments are to be made from Port Wade, at which place large ore pockets are to be constructed. The same Company has acquired the iron deposits at Austin brook, near Bathurst, New Brunswick. A railway has been constructed connecting the ore deposits with the Intercolonial railway and shipping piers built at Newcastle.

Quebec.—The production of bog ores in this Province is growing less year by year. During 1909, only 3,330 tons were shipped to furnaces, in addition to which a small tonnage of iron sands was shipped for experimental purposes.

A magnetometric survey was made of the Bristol mine, Pontiac county, by Mr. E. Lindeman of the Mines Branch, and a special bulletin has been published giving the results thereof. No shipments have been made from this mine since 1897, but between 1889 and 1897, inclusive, according to returns made to this Department, the mine shipped 29,815 tons. Mr. Lindeman sums up the results of his investigations as follows:—

'The magnetite occurs in parallel beds and lenticular-shaped bodies along the stratification of hornblendic and micaceous schists. The association of the magnetite and these gangue minerals seems to be very intimate; and in places, complete gradations exist between masses of magnetite and these rocks. Numerous intrusions of granite in the iron-bearing strata seem also to have had an important bearing on the horizontal extent of the deposits as well as on their depth, cutting them into irregular masses, and rendering their extent in depth uncertain. To judge from the irregular magnetic curves, and the numerous exposures of granite, this state of affairs seems to exist round Shaft No. 1.

'It is manifest that the unprofitable mining operations carried on some years ago were largely due to the irregularities of these ore bodies; to primitive methods of working; and to the long railway haul from the mine to Pennsylvania, U.S.A., where the ore is reported to have been shipped.

'On the other hand, the present investigation indicates that lot 22, and the east part of lot 21, contain some promising deposits. The most important of these is that on lot 22; the approximate area of which has been estimated at 90,000 square feet. As this deposit is practically all covered by a heavy loam, and taking into consideration the intimate association of the magnetite with the schistose rocks in other parts of the field, it is evident that no definite statement can be made with regard to the tonnage of iron ore in this deposit; but as far as it is now possible to judge from the strong, even, magnetic attraction, there is every reason to conclude that the deposit is of considerable magnitude. In order to ascertain the precise character and quantity of these ore reserves, systematic development in the form of diamond drilling will be necessary.'

Ontario.—This Province shows a considerably increased tonnage in iron ore shipments in 1909, due chiefly to a larger output from the Helen mine. There were five shipping mines, as compared with four during 1908.

No shipments were made by the Wilbur, in Lanark county, but the Atikokan mines, west of Port Arthur, were reopened; while the Dominion Bessemer

Ore Company, of Philadelphia, opened up an iron property about twenty-three miles east of Port Arthur, on Thunder bay, and shipped a quantity of ore in two grades, No. 1 running 52 per cent iron, and No. 2, 40 per cent. It is intended to equip the property with crushers and jigs, in order to prepare the ore for market and raise the percentage of metallic iron content.

From the Helen mine at Michipicoten, shipments were made to Hamilton and Sault Ste. Marie, exclusively, no ore being sent to the United States during 1909. The plant at the mine is now entirely electrically driven, taking about 400 horse-power. The Moose Mountain mine, in Hutton township, shipped chiefly to the United States, although one shipment each was made respectively to Sydney, N.S, and Hamilton, Ont. Shipments were also made from the Mayo mine in Hastings county, operated by the Canada Iron Corporation, Limited, under lease, the ore being shipped to Midland and Radnor.

Following is a list of the principal producers of iron ore:—

Canada Iron Corporation, Limited, Mark Fisher Bldg., Montreal.

E. H. Duval, Lévis, Que. (Guay P.O.).

H. C. Bosse, 92 St. Peter street, Quebec, Que.

Dominion Bessemer Ore Company, Limited, 472 Bullitt Bldg., Philadelphia, Pa.

The Lake Superior Power Company, Sault Ste. Marie, Ont.

Atikokan Iron Company, Limited, Port Arthur, Ont,

Moose Mountain Limited, Sellwood, Ont.

IMPORTS AND EXPORTS.

During the past fourteen years the iron smelting industry in Canada has had to draw more and more upon imported supplies of iron ore, a large portion of these supplies being, however, derived from Newfoundland, which should hardly be looked upon as a foreign source, though for purposes of commerce it has to be so considered.

The total consumption of iron ore in Canadian furnaces in 1909 was 1,492,502 short tons, made up of 257,502 tons of Canadian ore and 1,235,000 tons of imported ore. The Canadian production was, therefore, only about 17 per cent of our requirements. Previous to 1896 the furnaces were supplied altogether by Canadian ores. The quantities of Canadian and imported ores annually charged to blast furnaces since 1887 are shown in Table 10. The Department of Customs does not separately publish statistics of iron ore imports.

Since the opening of the Helen mine at Michipicoten, and more recently the Moose Mountain mine in Hutton township, considerable quantities of iron ore have been exported to the United States. The statistics of exports for both calendar and fiscal years are shown in the two tables following, the statistics for the fiscal year having been added, to compare with the record of imports of iron ore into the United States from Canada, as published in the 'Foreign Commerce and Navigation of the United States, Washington, D.C., and shown in Table 6a. It so happened that from 1901 to 1906 the figures in the Canadian reports were inaccurate, owing to reasons explained in foot-notes to the tables.

IRON.—TABLE 5.

Exports of Iron Ore, Calendar Years, 1893-1909.

Calendar Year.	Tons.	Value.	Calendar Year.	Tons.	Value.
		$			$
1893	2,419	7,590	1902*	428,901	1,065,019
1894		21,294	1903*	368,233	922,571
1895	1,571	3,909	1904*	168,828	401,738
1896	1,033	1,911	1905*	168,289	407,881
1897	403	811	1906	74,778	149,177
1898	182	278	1907	25,901	45,907
1899	4,145	9,538	1908	(a)	
1900	5,527	13,511	1909	21,956	61,954
1901*	306,199	762,283			

* The export figures for the five years indicated are incorrect owing to a duplication of entries.
(a) The figures of the Trade Report for this year include ferro-products, and are, therefore, omitted.

IRON.—TABLE 6.

Exports of Iron Ore, Fiscal Years, 1879-1909.

Fiscal Year.	Tons.	Value.	Fiscal Year.	Tons.	Value.
		$			$
1879	3,562	7,530	1895	2,315	5,743
1880	30,524	76,474	1896	14	35
1881	44,677	114,850	1897	1,320	2,492
1882	43,835	135,463	1898	360	402
1883	44,914	138,775	1899	1,849	4,968
1884	25,308	66,549	1900	4,327	7,689
1885	54,367	132,074	1901*	58,401	150,657
1886	7,542	23,039	1902*	525,983	1,303,901
1887	23,345	71,934	1903*	293,510	733,230
1888	13,544	39,945	1904*	233,850	579,883
1889	24,752	60,289	1905*	224,908	540,909
1890	13,811	31,376	1906*	148,040	345,540
1891	14,648	32,582	1907†	34,191	65,367
1892	7,707	36,935	1908	26,310	46,686
1893	7,811	26,114	1909	3,933	71,663
1894	1,859	9,026			

* See foot-note to Table 5. † Nine months ending March 31, 1907.

IRON.—TABLE 6a.

Imports of Iron Ore into the United States from Canada, 1893-1909.*

Year ending June 30.	Short Tons.	Value.	Year ending June 30.	Short Tons.	Value.
		$			$
1893	7,706	17,186	1902	309,527	685,540
1894	301	756	1903	144,725	320,263
1895	2,681	10,114	1904	126,995	283,765
1896	39	142	1905	120,241	245,623
1897	2,535	5,243	1906	113,809	220,112
1898	1,313	2,904	1907	34,731	52,765
1899	2,585	5,120	1908	32,124	55,617
1900	4,477	5,550	1909	3,490	12,660
1901	34,453	76,159			

* Compiled from the 'Foreign Commerce and Navigation of the United States.'

PIG IRON AND STEEL.

The total production of pig iron in Canadian furnaces in 1909 was 757,162 short tons (676,038 long tons), valued at the furnace at $9,581,864; as compared with 630,835 short tons (563,246 long tons), valued at $8,111,194, in 1908. An increased production is, therefore, shown of 126,327 tons, or about 20 per cent, and this despite the fact that the Londonderry furnace was out of commission during the whole year. These figures do not include the output from electric furnaces, making ferro-products, which are situated at Welland and Sault Ste. Marie, Ont., and Buckingham, Que.

Of the total output of pig iron during 1909, 17,003 tons, valued at $371,368, or $21.84 per ton, were made with charcoal as fuel, and 740,159 tons, valued at $9,210,496, or $12.44 per ton, with coke. The amount of charcoal iron made in 1908 was 6,709 tons, and iron made with coke, 624,126 tons.

The classification of the production in 1909, according to the purpose for which it was intended, was as follows: Bessemer, 222,931 tons; basic, 400,921 tons; foundry, including miscellaneous, 116,307 tons.

The American Iron and Steel Association reported the production of Bessemer pig iron in 1908 as 126,348 short tons, as against 173,499 tons in 1907; and the production of basic pig iron in 1908 as 375,659 short tons, as against 382,208 tons in 1907.

The total production of pig iron in 1908 and 1909 is shown by provinces in the following table, the average value per ton being also indicated. In the case of Nova Scotia, a large proportion of the pig iron is directly converted to steel. A nominal value is placed upon this, and does not necessarily represent a market value. The Quebec production is entirely charcoal iron, which has for many years commanded a high price.

IRON.—TABLE 7.

Production of Pig Iron by Provinces, 1908-9.

Provinces.	1908.			1909.			Percentage increase or decrease in quantity.
	Tons.	Value.	Value per ton.	Tons.	Value.	Value per ton.	
		$	$		$	$	%
Nova Scotia	352,642	3,554,540	10 08	345,380	3,453,800	10 00	2·1
Quebec	6,709	171,383	25 55	4,770	125,623	26 34	28·9
Ontario	271,484	4,385,271	16 15	407,012	6,002,441	14 75	49·9
Total	630,835	8,111,194	12 86	757,162	9,581,864	12 65	20·0

The increased production in 1909 has been due to the greater activity of the Ontario furnaces, there having been a decreased production in both Nova Scotia and Quebec. For the first time since 1891 the Ontario production has exceeded that of Nova Scotia. The proportions of the whole contributed by the several provinces were, in 1909: Nova Scotia, 45·6 per cent; Ontario, 53·8 per cent, and Quebec about 0·6 per cent. In 1908 the proportions were: Nova Scotia, 56 per cent; Ontario, 43 per cent, and Quebec about 1 per cent. During the past five years the production has exceeded 500,000 tons annually; while from 1898 to 1904 the production ranged from 100,000 tons to 300,000 tons per annum.

Statistics of the total production of pig iron since 1887 by provinces are given in Table 8:—

IRON.—TABLE 8.

Annual Production of Pig Iron by Provinces, 1887-1909.

Year.	Nova Scotia.		Ontario.		Quebec.		Total.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.
		$		$		$		$
1887.....	19,320	250,000	.....	.....	5,507	116,192	24,827	366,192
1888.....	17,556	211,403	.....	.....	4,243	101,832	21,799	313,235
1889.....	21,289	383,202	.....	.....	4,632	116,670	25,921	499,872
1890.....	18,382	262,608	.....	.....	3,390	69,080	21,772	331,688
1891.....	21,353	309,527	.....	.....	2,538	59,374	23,891	337,901
1892.....	40,049	583,556	.....	.....	2,394	53,865	42,443	673,421
1893.....	46,472	553,408	.....	.....	9,475	236,875	55,947	790,283
1894.....	41,344	449,533	.....	.....	8,623	196,914	49,967	646,447
1895.....	35,192	417,083	.....	.....	7,262	169,653	42,454	586,736
1896.....	32,351	400,829	28,302	368,942	6,615	154,358	67,268	924,129
1897.....	22,500	230,000	26,115	291,466	9,392	217,235	58,007	738,701
1898.....	21,627	221,677	48,253	530,789	7,135	159,929	77,015	912,395
1899.....	31,100	404,300	64,749	808,157	7,094	164,849	102,943	1,377,306
1900.....	28,133	421,995	62,387	938,725	6,055	140,978	96,575	1,501,698
1901.....	151,130	1,764,017	116,371	1,599,413	6,875	149,493	274,376	3,512,923
1902.....	237,244	2,477,767	112,688	1,584,273	7,970	181,501	357,902	4,243,541
1903.....	201,246	2,186,273	87,004	1,345,464	9,635	210,973	297,885	3,742,710
1904.....	164,488	1,700,130	127,845	1,746,126	11,121	241,729	303,454	3,687,985
1905.....	261,014	2,440,722	256,704	3,868,197	7,588	166,267	525,306	6,475,186
1906.....	315,008	3,439,217	275,558	4,338,275	7,845	177,644	598,411	7,955,136
1907.....	366,456	4,211,913	275,459	4,581,309	10,047	232,004	651,962	9,125,226
1908.....	352,642	3,554,540	271,484	4,385,271	6,709	171,383	630,835	8,111,194
1909.....	345,380	3,453,800	407,012	6,002,441	4,770	125,623	757,162	9,581,864

Pig Iron Prices.—The selling prices of pig iron in Toronto and Montreal, according to quotations published in trade journals, showed comparatively little variation during the year. In Toronto, the quotation was practically constant at from $19.50 to $20 throughout the year. In Montreal, prices ranged from $18.50 to $20.50 for Midland or Hamilton pig iron.

In Pittsburgh, Pa., Bessemer iron was quoted at $16.50 in January, falling to $14.50 in May, and gradually increasing to $19 in December. Basic iron in the same market was quoted at $15.50 in January, falling to $14 in May, and increasing to $17 in December.

The quantities of iron ore, coke, charcoal, limestone, etc., consumed in blast furnaces in 1908 and 1909, are shown as follows:—

IRON.—TABLE 9.

Ore, Fuel, and Flux charged to Blast Furnaces, in years 1908-9.

	1908.			1909.		
	Quantity.	Value.	Canadian and Imported.	Quantity.	Value.	Canadian and Imported.
		$	%		$	%
Canadian iron ore and mill cinder..... tons.	209,266	741,491	17	257,502	892,947	17
Imported iron ore..... "	1,051,445	2,432,484	83	1,235,000	2,989,512	83
Canadian coke..... "	492,076	1,604,411	60	412,016	1,339,032	45
*Imported coke ..... "	325,670	1,525,711	40	507,255	2,214,578	55
Charcoal .....bushels.	1,121,990	85,738	.....	1,779,258	170,050	.....
Canadian limestone..... tons.	418,661	289,705	87	428,140	328,091	81
Imported " ..... "	64,404	53,436	13	97,936	83,091	19

* Including coke made from imported coal.

Previous to 1896 the pig iron made was entirely from Canadian ore. Since that date, however, increasing quantities of imported ore have been used, as well as imported fuels and fluxes, until in 1909 about 83 per cent of the ore charged, 55 per cent of the coke, and 19 per cent of the limestone were imported. This condition, of course, is due to questions of cost and transportation affecting each furnace. Just as the Newfoundland ore can be more cheaply and certainly laid down in Sydney, so also American coke can be delivered at Ontario furnaces more cheaply than Nova Scotia coke. In Ontario the coke fuel is all imported, and in the case of the furnaces at Sault Ste. Marie and Port Arthur the flux is imported. Of the ore used in this Province in 1909, about 44 per cent was imported, as compared with 65 per cent in 1908. The development of new ore bodies in this Province may possibly, in the near future, provide a domestic supply of ore, but for fuel Ontario will probably be dependent for some time upon United States sources.

According to returns made to the Department of Trade and Commerce in connexion with claims for bounty, 126,298 tons only of the total pig iron production in Canada in 1909 were credited to Canadian ore, and 607,718 tons to imported ore, and bounty paid upon it as such. No bounty is paid on the iron credited to the mill cinder, scale, etc., so that the above figures do not represent the total output of the furnaces.

Statistics of the quantities of ore, fuel, and flux charged to Canadian blast furnaces since 1887 are shown in the following table:—

IRON.—TABLE 10.

Iron Ore, Fuel, and Flux charged to Furnaces since 1887.

Calendar Year.	Iron Ore Charged.		Fuel Charged.			Limestone.
	Canadian.	Imported.	Charcoal.	*Coke from Canadian Coal.	Imported Coke.	
	Tons.	Tons.	Bus.	Tons.	Tons.	Tons.
1887	60,434	.....	940,400	33,581	.....	17,171
1888	54,956	.....	804,286	30,228	.....	16,857
1889	65,670	.....	755,800	36,333	.....	22,122
1890	57,304	.....	589,860	34,073	.....	18,478
1891	60,933	.....	441,812	32,796	.....	11,377
1892	96,948	.....	1,121,365	52,622	.....	22,967
1893	124,053	.....	1,302,720	65,332	.....	27,797
1894	108,871	.....	1,173,970	60,026	.....	35,101
1895	93,208	.....	789,561	51,629	.....	31,585
1896	96,560	46,300	756,600	50,067	33,990	37,462
1897	53,658	55,722	1,031,800	35,800	27,810	31,273
1898	57,881	77,107	836,400	31,952	50,407	33,913
1899	66,384	120,650	1,928,025	44,844	64,648	51,826
1900	71,341	112,042	1,799,737	45,021	59,345	52,966
1901	156,613	361,010	1,835,736	207,835	115,367	169,399
1902	125,664	559,381	2,146,623	362,208	112,314	293,594
1903	82,035	485,911	2,322,030	350,190	96,540	277,452
1904	180,932	454,671	3,477,470	257,182	130,210	211,278
1905	116,974	861,847	4,404,394	365,897	243,882	369,715
1906	221,733	982,740	2,168,476	462,672	304,676	456,036
1907	244,104	1,117,260	1,682,085	521,068	327,082	488,462
1908	209,266	1,051,445	1,121,990	492,076	325,670	483,065
1909	257,502	1,235,000	1,779,258	412,016	507,255	526,076

* Includes for the first ten years small quantity of coal.

Of sixteen completed furnaces, fifteen were in blast in 1909, for varying periods of time. The operating companies, with numbers and capacities of furnaces, were as follows:—

Dominion Iron and Steel Company, Sydney, C.B.: four completed furnaces of 280 tons capacity each per day; two operated throughout 1909, one for 168 days, and the fourth for 203 days.

Nova Scotia Steel and Coal Company, Limited, New Glasgow, N.S.: one furnace at Sydney Mines, C.B., of 200 tons capacity; operated throughout 1909.

Londonderry Iron and Mining Company, Limited, Londonderry, N.S.: one furnace of 100 tons capacity; idle throughout the year.

Canada Iron Corporation, Limited, Montreal, Que.: two small furnaces of seven and eight tons capacity, at Drummondville, Que., operated 3½ days; one furnace of 25 tons daily capacity, at Radnor Forges, Que., operated seven months during 1909; one furnace of 125 tons, at Midland, Ont., operated all year.

Standard Chemical Company of Toronto, Deseronto, Ont.: one furnace with a daily capacity of 50 tons; operated six months during 1909.

Hamilton Steel and Iron Company, Hamilton, Ont.: two furnaces: one of 200 tons capacity, operated throughout 1909; a second furnace of 300 tons capacity, operated 276 days in 1909.

Algoma Steel Company, Limited, Sault Ste. Marie, Ont.: two furnaces at Steelton, near Sault Ste. Marie, of 250 tons capacity each; operated throughout the year.

The Atikokan Iron Company, Limited, Port Arthur, Ont.: one furnace of 100 tons capacity; operated for 4½ months during 1909.

The total daily capacity of the sixteen furnaces is about 2,735 tons.

The number of men employed in 1909 was reported as 1,486, and the wages paid, $879,429. Of the sixteen completed furnaces, eleven were in blast and five idle on December 31, 1909.

Very little pig iron has been exported from Canada. The quantities exported during the past two years were, as shown in Table 17: 5,063 tons, valued at $186,778, in 1909; and 290 tons, valued at $10,614, in 1908. The figures for 1909 include ferro-silicon and other similar iron alloys. Considerable quantities of pig iron are, however, imported. During the calendar year 1909 the imports of ordinary pig iron were 147,925 tons, valued at $1,798,172, and of charcoal pig, 413 tons, valued at $5,727, or a total of 148,338 tons, valued at $1,803,919. During the calendar year 1908 the imports were 58,365 tons, valued at $790,433: comprising ordinary pig, 57,343 tons, valued at $771,615, and charcoal iron, 1,022 tons, valued at $18,818.

The annual imports of these two classes of pig iron since 1880 are shown in the following table, the statistics being given for the fiscal year. The duty or general tariff on pig iron is $2.50 per ton.

IRON.—TABLE 11.

Annual Imports of Pig Iron since 1880.

Fiscal Year.	Pig Iron.		Charcoal Pig Iron.		Total.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.
		$		$		$
1880	(a) 23,159	371,956	.....	.....	23,159	371,956
1881	(a) 43,630	715,997	.....	.....	43,630	715,997
1882	56,594	811,221	6,837	211,791	63,431	1,023,012
1883	75,295	1,085,755	2,198	58,994	77,493	1,144,749
1884	49,291	653,708	2,893	66,602	52,184	720,310
1885	42,279	545,426	1,119	27,333	43,398	572,759
1886	42,463	528,483	3,185	60,086	45,648	588,569
1887	46,295	554,388	3,919	77,420	50,214	631,808
1888	(b) 48,973	648,012	.....	.....	48,973	648,012
1889	(b) 72,115	864,752	.....	.....	72,115	864,752
1890	(b) 87,613	1,148,078	.....	.....	87,613	1,148,078
1891	(b) 81,317	1,085,929	.....	.....	81,317	1,085,929
1892	(b) 68,918	886,485	.....	.....	68,918	886,485
1893	56,849	682,209	5,944	84,358	62,793	766,567
1894	42,376	483,787	2,906	34,968	45,282	518,755
1895	31,637	341,259	2,780	31,171	34,417	372,430
1896	36,131	394,591	917	11,726	37,048	406,317
1897	25,766	291,788	2,936	35,373	28,702	327,161
1898	37,186	382,103	2,250	23,533	39,436	405,636
1899	44,261	452,911	1,955	19,123	46,216	472,034
1900	49,767	811,490	1,816	38,736	51,583	850,226
1901	35,293	548,033	490	7,121	35,783	555,154
1902	39,978	585,077	38	726	40,016	585,803
1903	91,730	1,338,574	882	16,352	92,612	1,354,926
1904	62,515	894,728	.....	.....	62,515	894,728
1905	71,005	857,879	.....	.....	71,005	857,879
1906	96,797	1,401,047	.....	.....	96,797	1,401,047
1907*	150,127	2,280,860	30	675	150,157	2,281,535
1908	210,053	3,448,125	2,237	45,475	212,290	3,493,600
1909	57,669	857,357	922	16,575	58,591	873,932
1910	158,910	2,118,445	596	8,690	159,506	2,127,135

* Nine months ending March.

(a) Comprises pig iron of all kinds.

(b) These figures appear in Customs reports under heading 'iron in pigs, iron kentledge and cast-iron.'

IRON.—TABLE 11a.

Annual Exports of Pig Iron, 1896-1909.

Calendar Year.	Tons.	Value.	Calendar Year.	Tons.	Value.
		$			$
1896	2,187	55,448	1903	4,400	78,382
1897	3,099	81,381	1904	21,016	200,363
1898	1,278	32,645	1905	866	22,284
1899	6,981	149,190	1906	305	7,429
1900	3,513	88,052	1907	439	13,504
1901	57,650	593,739	1908	290	10,614
1902	75,195	778,619	1909	5,063	186,778

World's production.—The production of pig iron in other countries is given hereunder for the past four years, in order to show the relative position occupied by Canada in the production of this metal.

IRON.—TABLE 12.

Production of Pig Iron in Principal Countries of the World, from 1906 to 1909: metric tons.

—	1906.	1907.	1908.	1909.
United States	25,713,556	26,195,340	16,191,907	26,209,677
Germany	12,292,819	12,875,159	11,805,321	12,625,575
United Kingdom	10,347,385	10,276,689	9,202,280	9,819,469
France	3,314,162	3,590,235	3,400,771	3,544,638
Russia	2,691,606	2,820,604	2,800,653	2,871,332
Austria-Hungary	1,687,581	1,872,684	1,518,549	**
Belgium	1,375,775	1,406,980	1,270,050	1,632,350
Canada	542,875	591,456	572,290	686,893
Sweden	604,789	615,778	567,821	443,000
Spain	379,241	355,240	403,554	**
Italy	135,296	112,232	112,924	207,800
China	*34,305	*36,306	66,409	74,000
Japan	42,679	51,943	45,396	**
Australasia	.....	29,902	30,393	**

* Exports. ** Not available.

FERRO-PRODUCTS.

These are made in small quantities in electric furnaces at Welland, and Sault Ste. Marie, Ont., and at Buckingham, Que.

At Buckingham the Electric Reduction Company, Limited, has for a number of years been making ferro-chrome, ferro-silicon, ferro-phosphorus, and other products, though for the past year or more the Company's operations, it is understood, have been restricted to the manufacture of phosphorus. The Electro Metals Company at Welland, Ont., has four furnaces of from 1,000 to 1,500 horse-power each in which ferro-silicon is made, the daily production being from five to eight tons. The Algoma Steel Company, at Sault Ste. Marie, makes ferro-silicon for its own consumption. Although complete returns of production were not received, the output was probably somewhat under 5,000 tons, and valued at about $55 per ton.

The imports of ferro-silicon, ferro-manganese, etc., during the calendar year 1909, were 17,699 tons, valued at $411,536, an average of $23.25 per ton. The imports since 1887 are shown in Table 13, the figures of the table being for the fiscal year.

IRON.—TABLE 13.

Imports of Ferro-Manganese, Etc., 1887-1909.

Fiscal Year.	Tons.	Value.	Fiscal Year.	Tons.	Value.
		$			$
*1887	123	1,435	†1899	1,160	22,539
*1888	1,883	29,812	†1900	1,149	39,064
*1889	5,868	72,108	†1901	1,512	38,954
*1890	696	18,895	†1902	6,513	150,977
*1891	2,707	40,711	†1903	6,350	162,710
*1892	1,311	23,930	†1904	2,975	75,554
*1893	529	15,858	†1905	12,935	246,815
*1894	284	9,885	†1906	15,023	462,739
†1895	164	5,408	†1907 (9 months)	16,414	610,875
†1896	652	12,811	†1908	17,417	612,062
†1897	426	9,233	†1909	13,053	388,024
†1898	1,418	22,516			

* These amounts include: ferro-manganese, ferro-silicon, spiegel, steel bloom ends and crop ends of steel rails, for the manufacture of iron or steel

† Ferro-silicon, spiegeleisen, and ferro-manganese

STEEL.

Returns of steel production received direct from the producers showed a total production of ingots and castings in 1909 of 754,719 tons, valued at $14,359,800; as compared with 588,763 tons, valued at $10,916,602, in 1908, and 706,982 tons, valued at $15,612,590, in 1907. Of the production in 1909, 535,988 tons were open-hearth ingots; 203,715 tons, Bessemer ingots; 14,013 tons, direct steel castings, and 1,003 tons of other steels. Compared with 1908, there is an increase in total production of 165,956 tons, or 28·2 per cent. The production during the past three years is shown in Table 14 below.

IRON.—TABLE 14.

Production of Steel, 1907, 1908, and 1909.

Description.	1907.		1908.		1909.	
	Short Tons.	Value.	Short Tons.	Value.	Short Tons.	Value.
		$		$		$
Ingots, open-hearth (basic)	459,240	9,157,703	443,442	7,684,277	535,988	9,372,615
Bessemer (acid)	225,989	4,293,791	135,557	2,535,287	203,715	3,829,012
Castings, open-hearth	20,602	2,031,380	9,051	617,126	14,013	1,043,460
Other steels	1,151	129,716	713	79,912	1,003	114,713
Total	706,982	15,612,590	588,763	10,916,602	754,719	14,359,800

Statistics of production of steel ingots and castings since 1894 are given in the following table, the figures from 1894 to 1906, inclusive, having been collected and published by the American Iron and Steel Association, those for 1907 to 1909 being as shown in Table 14.

IRON.—TABLE 15.

Annual Production of Steel Ingots and Castings, 1894-1909.

Calendar Year.	Short Tons.	Calendar Year.	Short Tons.	Calendar Year.	Short Tons.
1894	28,767	1900	26,406	1906	639,396
1895	19,040	1901	29,214	1907	706,982
1896	17,920	1902	203,881	1908	588,763
1897	20,608	1903	203,296	1909	754,719
1898	24,125	1904	166,381		
1899	24,640	1905	451,863		

Following is a list of firms making steel in Canada:—

Dominion Iron and Steel Company, Sydney, C.B.
Nova Scotia Steel and Coal Company, New Glasgow, N.S.
Montreal Steel Works, Limited, Montreal, Que.
The Algoma Steel Company, Sault Ste. Marie, Ont.
The Hamilton Steel and Iron Company, Hamilton, Ont.
The Wm. Kennedy Sons, Limited, Owen Sound, Ont.
The Ottawa Steel Castings Company, Limited, Ottawa, Ont.
The Ontario Iron and Steel Company, Limited, Welland, Ont.

Rolled products, etc.—Complete statistics of the production of rolled products and manufactured steel have not been obtained. The production of steel rails, however, in 1909 was returned as 377,642 short tons; as compared with 300,935 short tons produced in 1908.

The production of finished rolled iron and steel in Canada from 1904 to 1908, as ascertained by the American Iron and Steel Association, was as follows, in long tons:—

Annual Production of Rolled Iron and Steel, 1904-8.

Products—Gross Tons.	1904.	1905.	1906.	1907.	1908.
Rails	36,216	178,885	312,877	311,461	268,692
Structural shapes and wire rods	11,195	48,850	48,351	65,541	41,520
Plates and sheets	3,102	4,944	15,202	18,493	11,656
Nail plate	5,030	4,110	2,183	1,720	2,126
All other finished rolled forms	124,495	149,037	193,129	202,964	172,523
Totals	180,038	385,826	571,742	600,179	496,517

BOUNTIES.

Bounties on iron and steel made in Canada were provided for by the Dominion government in 1897 (Chapter 6, Statutes of Canada, 1897). This

Act was amended in 1899 (Chapter 8, Statutes of Canada, 1899), and again in 1903 (Chapter 68, Statutes of Canada, 1903). The latter Act provided for the payment of bounty until June 30, 1907. On April 27, 1907, a new Act was passed (Chapter 24, Statutes of Canada, 1907), providing for the further payment of bounties from January 1, 1907, to December 31, 1910, and in the case of pig iron made by electric smelting, until December 31, 1912. The Act is as follows:—

An Act Respecting Bounties on Iron and Steel made in Canada.

(Assented to, 27th April, 1907.)

His Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

1. The Governor in Council may authorize the payment out of the Consolidated Revenue Fund of the following bounties on the undermentioned articles when manufactured in Canada for consumption therein, viz.:—

(*a*) In respect of pig iron manufactured from ore, on the proportion from Canadian ore produced during the calendar year:—

1907	$2 10 per ton.
1908	2 10 "
1909	1 70 "
1910	0 90 "

(*b*) In respect of pig iron manufactured from ore, on the proportion from foreign ore produced during the calendar year:—

1907	$1 10 per ton.
1908	1 10 "
1909	0 70 "
1910	0 40 "

(*c*) On puddled iron bars manufactured from pig iron made in Canada during the calendar year:—

1907	$1 65 per ton.
1908	1 65 "
1909	1 05 "
1910	0 60 "

(*d*) In respect of rolled, round wire rods not over three-eighths of an inch diameter, manufactured in Canada from steel produced in Canada from ingredients of which not less than fifty per cent of the weight thereof consists of pig iron made in Canada, when sold to wire manufacturers for use, or when used in making wire in their own factories in Canada, on such wire rods made after the thirty-first day of December, one thousand nine hundred and six, six dollars per ton.

(*e*) In respect of steel manufactured from ingredients of which not less than fifty per cent of the weight thereof consists of pig iron made in Canada, on such steel made during the calendar year:—

1907	$1 65	per ton.
1908	1 65	"
1909	1 05	"
1910	0 60	"

(2) No bounty shall be paid under the foregoing provisions in respect of iron or steel made in Canada by electric process after the thirty-first day of December, one thousand nine hundred and eight.

2. The Governor in Council may authorize the payment out of the Consolidated Revenue Fund of the following bounties on the undermentioned articles when manufactured in Canada for consumption therein, viz.:—

(*a*) On pig iron manufactured from Canadian ore by the process of electric smelting during the calendar year:—

1909	$2 10	per ton.
1910	2 10	"
1911	1 70	"
1912	0 90	"

(*b*) On steel manufactured by electric process direct from Canadian ore, and on steel manufactured by electric process from pig iron smelted in Canada by electricity from Canadian ore during the calendar year:—

1909	$1 65	per ton.
1910	1 65	"
1911	1 05	"
1912	0 60	"

(2) Bounty, as on pig iron under this section, may be paid upon the molten iron from the ore which in the electric furnace enters into the manufacture of steel by the direct process, the weight of such iron to be ascertained from the weight of the steel so manufactured.

3. No bounty shall be paid on steel ingots from which steel blooms and billets for exportation from Canada are manufactured.

4. The Governor in Council may make regulations to carry out the intention of this Act.

5. The Minister of Trade and Commerce shall be charged with the administration of this Act.

6. Chapter 8 of the Statutes of 1899, Chapter 68 of the Statutes of 1903, and Chapter 39 of the Statutes of 1904, are repealed.

7. This Act shall be deemed to have come into force on the first day of January, one thousand nine hundred and seven.'

The amount of bounties paid on iron and steel during the calendar years 1908 and 1909, as kindly furnished by the Department of Trade and Commerce, are shown in Table 16, following:—

IRON.—TABLE 16.

Bounty Paid during the Calendar Years 1908 and 1909.

Product on which Bounty was paid.	1908.		1909.	
	Tons.	Bounty.	Tons.	Bounty.
		$		$
Pig iron made from Canadian ore ...	101,647	213,458 34	126,298	214,705 80
" " imported ore.....	517,427	569,169 93	607,718	425,402 64
Total pig iron.....	619,074	782,628 27	734,016	640,108 44
Steel ingots.....	556,289	917,876 63	729,189	766,470 41
Steel wire rods.....	49,630	297,778 68	81,405	488,432 70
Totals.....	1,224,993	1,998,283 58	1,544,610	1,895,011 55

The total bounty payments during the calendar year 1909 on iron and steel were $1,895,011.55, the amount paid to the several companies and the quantities of the different products on which the bounties were paid being shown in the following tables:—

Bounties Paid on Pig Iron, manufactured in Canada, during the Twelve Months ending December, 1909.

Name of Claimant.	Tons of Canadian ore used.	Tons of foreign ore used.	Tons of pig iron made from Canadian ore.	Bounty on pig iron from Canadian ore.	Tons of pig iron from foreign ore.	Bounty on pig iron from foreign ore.	Total tons of pig iron produced.	Amount of claim.
	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.	$ cts.
Dominion Iron and Steel Co., Ltd.	1,742 00	577,065 00	908 27	1,544 06	277,042 95	193,930 06	277,951 22	195,474 12
Hamilton Steel and Iron Co., Ltd	121,121 14	181,131 15	68,001 34	115,602 30	88,916 55	62,241 59	156,917 89	177,843 89
Nova Scotia Steel and Coal Co., Ltd	.....	110,649 00	.....	.....	57,885 00	40,519 50	57,885 00	40,519 50
Algoma Steel Co., Ltd.	66,930 67	283,531 65	35,041 07	59,569 82	140,525 98	98,368 19	175,567 05	157,938 01
Atikokan Iron Co., Ltd.	13,452 12	.....	8,882 22	15,099 76	.....	.....	8,882 22	15,099 76
Canada Iron Corp., Ltd., (Drummondville)	60 90	.....	19 94	33 90	.....	.....	19 94	33 90
" " (Midland)	17,280 83	58,421 12	9,267 27	15,652 37	30,602 43	21,421 73	39,809 70	37,074 10
" " (Radnor)	9,884 84	1,487 81	3,939 56	6,697 22	810 42	567 28	4,749 98	7,264 50
Standard Chemical Co. of Toronto, Deseronto	622 21	23,201 73	297 88	506 37	11,934 76	8,354 29	12,232 64	8,860 66
	231,094 71	1,235,487 46	126,297 55	214,705 80	607,718 09	425,402 64	734,015 64	640,108 44

Bounties Paid on Steel Ingots during the Twelve Months ending December, 1909.

—	Tons of Canadian pig iron used.	Tons of foreign pig iron used.	Tons of other ingredients.	Tons of steel made.	Bounty paid.
Dominion Iron and Steel Co., Ltd.	279,651 44	.....	95,346 60	332,320 99	348,937 06
Hamilton Steel and Iron Co., Ltd	43,722 56	.....	40,108 49	76,847 94	80,690 36
Nova Scotia Steel and Coal Co., Ltd	52,006 42	.....	20,966 45	64,239 94	67,451 95
Algoma Steel Co., Ltd.	181,842 04	6,978 82	31,045 71	199,770 05	209,758 55
Lake Superior Iron and Steel Co., Ltd.	28,466 77	54 50	26,940 74	51,740 24	54,327 26
*Ontario Iron and Steel Co., Ltd.	3,222 17	.....	2,883 07	4,270 21	5,305 23
	588,911 40	7,033 32	217,291 06	729,189 37	766,470 41

* Includes a small quantity produced in 1908.

During the year bounty to the amount of $488,432.70 was paid the Dominion Iron and Steel Co., Ltd., for 81,405.42 tons of wire rods made.

Total Bounty paid to each Company during the past three Fiscal years.

Corporations.	1907.	1908.	1909.
	$ cts.	$ cts.	$ cts.
Algoma Steel Co., Ltd	348,292 48	534,025 50	367,696 56
Atikokan Iron Company, Ltd	.....	17,210 46	15,099 76
* Canada Iron Furnace Co., Ltd	28,793 35	51,213 12	44,372 50
* John McDougall and Co.	2,062 58	5,368 12	
† Deseronto Iron Co., Ltd.	2,598 75	7,299 30	8,860 66
Dominion Iron and Steel Co., Ltd	669,042 56	1,228,915 39	1,032,843 88
Electric Reduction Co., Ltd	235 20	.....	.....
Hamilton Steel and Iron Co., Ltd	125,678 25	222,490 31	258,534 25
Londonderry Iron and Mining Co., Ltd	28,505 79	37,441 52	.....
Lake Superior Iron and Steel Co.	.....	17,500 60	54,327 26
Montreal Rolling Mills Co.	881 19	.....	.....
Nova Scotia Steel and Coal Co., Ltd	93,710 89	181,436 26	107,971 45
Ontario Iron and Steel Co.	.....	251 77	5,305 23
	1,299,801 04	2,302,152 35	1,895,011 55

* Amalgamated in 1909 to form Canada Iron Corporation, Ltd.
† In 1909 worked by the Standard Chemical Co. of Toronto.

Total Bounties on Iron and Steel paid by the Government of Canada since 1896.

Year ended.	Pig Iron.	Puddled iron bars.	Steel.	Manufactures of Steel.
	$	$	$	$
June 30, 1896	104,105	5,611	59,499	
" 1897	66,509	3,019	17,366	
" 1898	165,654	7,706	67,454	
" 1899	187,954	17,511	74,644	
" 1900	238,296	10,121	64,360	
" 1901	351,259	16,703	100,058	
" 1902	693,108	20,550	77,431	
" 1903	666,001	6,702	729,102	
" 1904	533,982	11,669	347,990	15,321
" 1905	624,667	7,895	676,318	231,324
" 1906	687,632	5,875	941,000	369,832
March 31, 1907 (9 months)	385,231	312	575,259	338,999
" 1908	863,817	.....	1,092,201	347,135
" 1909	693,423	.....	838,100	333,091
Totals	6,261,638	113,674	5,660,782	1,635,702

EXPORTS AND IMPORTS OF IRON AND STEEL GOODS.

The value of the exports of iron and steel products from Canada in 1909 was $2,598,756, as compared with a value of $2,098,138 in 1908. Details are shown in Table 17 following:—

IRON.—TABLE 17.

Exports of Iron and Steel goods, the product of Canada, during the Calendar Years 1908 and 1909.

		1908.		1909.	
		Quantity.	Value.	Quantity.	Value.
			$		$
Stoves	No.	651	8,258	774	10,330
Castings, N.E.S	$	.....	28,062	.....	25,038
Pig iron	Tons.	290	10,614	5,063	186,778
Machinery (linotype machines)	.....	.....	126,590	.....	43,686
" N.E.S	.....	.....	285,257	.....	421,707
Sewing machines	No.	9,697	109,002	12,759	147,402
Typewriters	"	3,720	169,939	3,749	238,167
Scrap iron and steel	Cwt.	92,566	73,807	410,506	305,256
Hardware, tools, etc	$	.....	57,631	.....	52,207
" N.E.S	"	.....	59,304	.....	35,507
Steel and manufactures of	"	.....	1,169,674	.....	1,132,678
Totals		.....	2,098,138	.....	2,598,756

Nearly 44 per cent of the total exports in 1909 are entered as steel and its manufactures. The export of these products has grown very rapidly during the past few years, having increased from a value of $477,766 in 1907 to a value of $1,132,678 in 1909.

The total imports of iron and steel goods, as compiled from the annual reports of Trade and Navigation, are given in Table 19, showing the imports subject to duty, and Table 20, showing the imports free of duty.

The total value of the imports during the fiscal year ending March, 1909, was $40,393,431; as compared with $61,819,698 during the previous fiscal year.

The weights or quantities are in many cases not given, so that it is not possible to state the total tonnage of iron and steel imported. A minimum estimate of the tonnage can, however, be arrived at by selecting those items for which the weights are given. This has been done, and the results are given in Table 18.

The imports of these selected items showed a total tonnage in 1909 of 545,594; as compared with 1,079,000 tons in 1908, and 783,025 tons during the nine months ending March, 1907. The statistics for 1909 show a falling off in imports in all classes of iron and steel goods.

IRON.—TABLE 18.

Imports of some Iron and Steel products of which the quantities are available.

Material.	Twelve months ending March, 1908.	Twelve months ending March, 1909.
	Tons.	Tons.
Pig iron	212,290	58,591
Ferro-products and chrome steel	17,661	13,206
Ingots, blooms, billets, puddled bars, etc	21,222	8,887
Scrap and scrap steel	69,213	26,212
Plates and sheets	126,172	101,317
Bars, rods, hoops, bands, etc	98,631	69,818
Structural iron and steel	373,871	162,735
Rails and connexions	52,706	32,543
Pipe and fittings	25,090	18,309
Nails and spikes	2,741	1,432
Wire	57,046	39,452
Forgings, castings, and manufactures	22,357	13,092
Total	1,079,000	545,594

Imports of Iron and Steel Goods subject to Duty.

Material.		Twelve Months ending March, 1908.		Twelve Months ending March, 1909.	
		Quantity.	Value.	Quantity.	Value.
			$		$
Agricultural implements, N.O.P., viz.:—					
Binding attachments	$		639		1,294
Cultivators and weeders	No	5,491	44,983	3,911	26,389
Drills, seed	"	2,887	87,334	3,579	123,542
Farm, road or field rollers	"	123	18,052	52	14,044
Forks, pronged	"	11,466	6,548	5,822	4,142
Harrows	"	3,446	50,988	3,853	61,220
Harvesters, self-binding	"	880	85,662	1,206	129,775
Hay loaders	"	562	26,432	370	19,926
Hay tedders	"	44	1,374		1,174
Hoes	"	4,436	1,034	3,698	1,145
Horse rakes	"	1,117	28,474	591	18,260
Knives, hay or straw	"	1,729	1,207	6,261	2,428
Knives, edging	"	180	223	1,102	241
Lawn mowers	"	2,305	12,884	4,680	17,920
Manure spreaders	"	800	73,407	196	19,827
Mowing machines	"	1,673	47,668	1,731	61,599
Ploughs	"	16,551	438,129	13,192	462,184
Post hole diggers	"	1,589	1,019	762	804
Potato diggers	"	1,044	41,179	717	25,468
Rakes, N.O.P.	"	11,967	3,350	13,922	2,249
Reapers	"	531	25,688	297	17,009
Scythes	Doz.	2,441	12,951	2,493	11,624
Sickles or reaping hooks	"	222	463	1,190	546
Snaths	"	4	17	6	35
Spades and shovels of iron or steel, N.O.P.	"	6,469	29,877	5,005	21,219
Spade and shovel blanks, and iron or steel cut to shape for the same	"	3,720	5,788	1,902	2,521
Parts of agricultural implements paying 12½ per cent and 17½ per cent	$		314,193		252,414
" " " 12½, 17½, and 20 per cent	"		314,598		260,959
All other agricultural implements, N.O.P.	"		75,259		50,862
Anvils and vises	"		70,537		45,033
Cart or wagon skeins or boxes	Lbs.	277,945	7,035	12,919	914
Springs N.O.P. and parts thereof, of iron or steel, for railway, tramway, or other vehicles	Cwt.	48,471	128,001	3,105	16,831

Imports of Iron and Steel Goods subject to duty.

Material.		Twelve months ending March, 1908.		Twelve months ending March, 1909.	
		Quantity.	Value.	Quantity.	Value.
			$		$
Axle and axle parts, N.O.P., and axle blanks and parts thereof of iron or steel for railway, tramway, or other vehicles	Cwt.	43,895	136,558	39,153	100,731
Bar iron or steel, rolled, whether in coils, bundles, rods or bars, comprising rounds, ovals, squares, and flats, N.O.P.	"	1,497,690	2,580,823	785,981	1,223,995
Butts and hinges N.O.P.	$	.....	65,773	.....	38,246
Canada plates, Russia iron, terne plate, and rolled sheets of iron and steel coated with zinc, spelter or other metal, of all widths or thicknesses, N.O.P.	Cwt.	79,722	262,134	74,860	233,753
Castings, iron or steel, N.O.P.	$	.....	593,672	.....	328,368
Cast iron pipe of every description	Cwt.	431,034	598,358	320,275	370,085
Cast scrap iron	Tons	26,371	458,489	15,190	202,842
Chains, coil chains, chain links, and chain shackles of iron or steel of $\frac{5}{16}''$ diameter, and over.	Cwt.	81,991	281,304	45,386	131,324
Chains, N.O.P.	$	.....	52,864	.....	34,221
Tacks, shoe	Lbs.	16,735	1,033	23,322	1,929
Nails, brads, spikes, and tacks of all kinds, N.O.P	"	269,331	16,346	335,638	22,678
Engines, etc.:—					
Locomotives for railways	No.	195	1,233,089	113	384,086
Motor cars for railways and tramways	"	11	12,002	2	3,900
Engines, fire	"	28	19,380	17	13,411
" gasoline	"	3,230	693,153	4,076	714,574
" steam	"	659	422,585	380	234,224
Boilers, steam	"	517	274,158	372	114,975
" N.O.P.	"	1,197	67,161	287	39,144
Fire extinguishing machines, including sprinklers for fire protection	$	.....	51,014	.....	78,690
Fittings, iron or steel, for iron or steel pipe of every description	Lbs.	7,077,317	499,050	4,590,270	282,552
Flat eye-bar blanks, not punched or drilled, for use exclusively in the manufacture of bridges or of steel structural work, or in car construction	Tons.	89	5,224	3	80
Ferro-silicon, spiegeleisen, and ferro-manganese	"	17,417	612,062	13,053	388,024
Forgings of iron and steel of whatever size, shape, or in whatever stage of manufacture, N.O.P., and steel shafting, turned, compressed or polished and hammered, drawn or cold rolled iron or steel bars or shapes, N.O.P.	Lbs.	3,021,923	149,219	2,270,838	96,388
Hardware, viz.: builders, cabinet-makers, upholsterers, harness-makers, saddlers and carriage hardware, including curry-combs, N.O.P.	$	.....	578,090	.....	365,230
Horse, mule, and ox shoes	"	.....	10,212	.....	5,880
Iron or steel billets, weighing not less than 60 pounds per lineal yard	Cwt.	297,329	416,163	78,797	95,350

Iron or steel ingots, cogged ingots, blooms, slabs, puddled bars, and loops, or other forms, N.O.P., less finished than iron or steel bars, but more advanced than pig iron, except castings	Cwt.	94,441	135,177	74,305	53,135
" bridges or parts thereof, iron or steel structural work, columns, shapes or sections, drilled, punched or in any further stage of manufacture than as rolled or cast, N.O.P	Tons.	244,992	645,608	69,636	176,613
Iron in pig	"	210,053	3,448,125	57,669	857,357
" charcoal	"	2,237	45,475	922	16,575
Locks of all kinds	$	.....	336,405	.....	222,000
Machines, machinery, etc. :—					
Automobiles and motor vehicles of all kinds	No.	674	912,371	533	585,097
" " " parts of	$	.....	136,858	.....	127,143
Fanning mills	No.	1,648	23,051	1,160	12,813
Grain crushers	"	113	2,801	12	263
Windmills and complete parts thereof	"	708	36,171	754	38,284
Ore crushers and rock crushers, stamp mills, cornish and belted rolls, rock drills, air compressors, cranes, derricks, and percussion coal cutters	$	.....	178,951	.....	176,014
Portable machines :—					
Fodder or feed cutters	No.	203	2,302	187	1,740
Horse-powers for farm purposes	"	25	2,321	20	958
Portable engines with boilers in combination and traction engines for farm purposes	"	700	1,033,868	602	794,854
Portable sawmills and planing mills	"	21	23,352	20	18,759
Steam shovels	"	14	71,052	29	152,027
Threshing machine separators	"	649	386,583	624	362,083
" " " parts of, including wind-stackers, baggers, weighers, and self-feeders for same, and finished parts thereof for repairs, when imported separately	$	.....	266,427	.....	239,118
All other portable machines, N.O.P., and parts	"	.....	96,254	.....	19,891
Sewing machines	No.	16,065	268,198	11,823	207,295
" " parts of	$	.....	96,745	.....	52,044
Slot machines	No.	784	22,569	248	7,832
Machines, typewriting	"	7,058	546,068	6,050	446,851
" type-casting and type-setting, and parts thereof, adapted for use in printing offices	"	109	241,445	20	123,446
Machines specially designed for ruling, folding, binding, embossing, creasing or cutting paper or cardboard, when for use exclusively by printers, bookbinders, and by manufacturers of articles made from paper or cardboard, including parts thereof, composed wholly or in part of iron, steel, brass, or wood	"	595	135,899	266	88,493
Machines for carding, spinning, weaving, or knitting, imported by manufacturers for such purposes	$	.....	707,949	.....	823,698
Lithographic presses and type-making accessories for same	"	.....	38,331	.....	27,131
Printing presses	"	.....	257,522	.....	160,600
All machinery composed wholly or in part of iron or steel castings, and iron or steel integral parts of all machinery specified in tariff item 453	"	.....	8,005,310	.....	5,516,890
Malleable iron castings and iron or steel casting, N.O.P	Cwt.	12,788	53,561	7,797	34,001
Nails and spikes, composition and sheathing nails	Lbs.	17,603	2,862	74,485	4,991

Imports of Iron and Steel Goods subject to Duty

Material.		Twelve months ending March, 1908.		Twelve months ending March, 1909.	
		Quantity.	Value.	Quantity.	Value.
			$		$
Nails and spikes, cut (ordinary builders)	Cwt.	4,124	10,359	2,897	6,785
Railway spikes	"	29,850	59,665	18,902	34,260
Nails, wire of all kinds, N.O.P.	"	7,870	27,017	6,088	25,160
Pumps, hand, N.O P.	No.	14,566	80,299	11,951	54,216
Iron and steel railway bars or rails of any form, punched or not, N.O.P., for railways, which term for the purposes of this item shall include all kinds of railways, street railways and tramways, even although they are used for private purposes only, and even although they are not used or intended to be used in connexion with the business of common carrying of goods or passengers	Tons.	49,187	1,278,084	29,547	797,479
Railway fish-plates	"	1,225	55,193	1,784	67,045
Railway tie-plates	"	859	40,046	333	15,147
Rolled iron or steel angles, tees, beams, channels, girders, and other rolled shapes or sections, not punched or drilled or further manufactured than rolled, N.O.P.	Cwt.	660,869	1,064,890	383,529	553,702
Rolled iron or steel beams, channels, angles, and other rolled shapes of iron and steel, not punched, drilled or further manufactured than rolled, weighing not less than 35 pounds per lineal yard, not being square, flat, oval or round shapes, and not being railway bars or rails	"	1,474,074	2,202,516	1,050,541	1,444,741
Rolled iron or steel hoop, band, scroll or strip, 12″ or less in width, No. 13 gauge and thicker, N.O.P.	"	52,735	99,977	34,969	59,501
Rolled iron or steel hoop, band, scroll or strip, No. 14 gauge and thinner, galvanized or coated with other metal or not, N.O.P.	"	105,568	285,670	86,283	204,169
Rolled iron or steel sheets or plates, sheared or unsheared, and skelp iron or steel, sheared or rolled grooves, N.O.P	"	317,512	539,220	156,910	242,690
Rolled iron or steel plates not less than 30″ in width and not less than ¼″ in thickness, N.O.P	"	419,733	666,288	335,447	453,205
Rolled iron or steel sheets and strips, polished or not, No. 14 gauge and thinner, N.O.P.	"	230,839	581,624	204,522	498,705
Rolls of chilled iron or steel	"	1,998	6,930	1,547	5,056
Sad or smoothing hatters' and tailors' irons	$	.....	7,706	.....	5,836
Safes, doors for safes and vaults	"	.....	147,004	.....	92,491
Screws, iron and steel, commonly called 'wood screws,' N.O.P., including lag or coach screws, plated or not, and machine or other screws, N.O.P	Gross.	200,357	41,141	100,391	19,219
Scales, balances, weighing beams, and strength-testing machines of all kinds	$	.....	195,464	.....	174,738

Shafting, round, steel, in bars not exceeding 2½″ diameter	Cwt.	43,387	89,428	28,322	53,747
Sheets, flat, of galvanized iron or steel	"	153,069	484,585	128,002	388,885
Sheets, iron or steel, corrugated, galvanized	"	2,812	9,456	1,328	3,891
Sheets, iron or steel, corrugated, not galvanized	"	522	2,084	244	753
Skates of all kinds, roller or other, and parts thereof	Pairs.	114,340	94,616	92,005	49,164
Skelp iron or steel, sheared or rolled in grooves, imported by manufacturers of wrought iron or steel pipe, for use exclusively in the manufacture of wrought iron or steel pipe in their own factories	Cwt.	704,709	1,201,942	685,341	925,417
Steel billets, N.O.P	"	32,681	48,672	24,638	31,869
Stoves of all kinds, for coal, wood, oil, spirits, or gas	$	.....	469,881	.....	355,786
Stove urns of metal, and dovetails, chaplets, and hinge tubes of tin for use in the manufacture of stoves	"	.....	16,267	.....	14,753
Switches, frogs, crossings, and intersections for railways	Cwt.	28,692	143,781	17,582	74,527
Tubing:—					
Wrought or seamless tubing, iron or steel, plain or galvanized, threaded and coupled, or not, over 4″ diameter, N.O.P	$	.....	371,795	.....	245,238
Wrought or seamless tubing, iron or steel, plain or galvanized, threaded and coupled, or not, 4″ and less in diameter, N.O.P	"	.....	321,982	.....	212,283
Seamless steel tubing, valued at not less than 3½ cents per lb	Cwt.	5,331	29,942	4,102	24,237
Rolled or drawn square tubing of iron or steel, adapted for use in the manufacture of agricultural implements	$	.....	7,884	.....	4,636
Iron or steel pipe or tubing, plain or galvanized, riveted, corrugated or otherwise specially manufactured, including lockjoint pipe, N.O.P	"	.....	221,140	.....	167,803
Iron or steel pipe, not butt or lap welded, and wire bound wooden pipe, not less than 30″ internal diameter, when for use exclusively in alluvial gold mining	"	.....	130,265	.....	16,850
Ware—Agate, granite, or enamelled iron or steel ware	"	.....	113,407	.....	122,418
Ware—Iron or steel hollow ware, plain black or coated, N.O.P., and nickel and aluminium kitchen or household hollow ware	"	.....	34,217	.....	20,908
Wire bale ties	Bundles of 250 ties	629	685	4,541	5,635
Wire bound wooden pipe, N.O.P		.....	29	.....	.....
Wire cloth or woven wire and netting of iron or steel	Lbs.	1,559,650	85,769	1,376,974	74,422
Wire, crucible cast steel, valued at not less than 6 cents per lb	"	146,064	23,689	77,410	14,964
Wire screens, doors, and windows	$	.....	7,377	.....	5,864
Wire buckthorn strip fencing, woven wire fencing, and wire fencing of iron and steel, N.O.P., not to include woven wire or netting made from wire smaller than No. 14 gauge, not to include fencing or wire larger than No. 9 gauge	Lbs.	1,969,592	57,924	1,363,438	45,513
Wire, single or several, covered with cotton, linen, silk, rubber, or other material, including cable so covered	"	2,237,772	442,416	1,674,448	277,662
Wire of iron and steel all kinds, N.O.P	"	11,099,983	310,090	4,723,315	136,628
Wire rope, stranded or twisted wire clothes lines, picture or other twisted wire, and wire cables, N.O.P	"	5,503,924	408,945	3,146,825	225,675
Iron or steel nuts, rivets, or bolts with or without threads, nut bolt, and hinge blank, and T and strap hinges of all kinds, N.O.P	Cwt.	48,555	199,218	23,962	88,248
Iron or steel scrap, wrought, being waste or refuse, including punchings, cuttings, and clippings of iron or steel plates or sheets having been in actual use: crop ends of tin plate bars, blooms, and rails, the same not having been in actual use	"	656,501	506,698	220,444	140,875
Penknives, jack-knives, and pocket knives of all kinds	$	.....	131,597	.....	102,973

Imports of Iron and Steel Goods subject to Duty

Material.		Twelve months ending March, 1908.		Twelve months ending March, 1909.	
		Quantity.	Value.	Quantity.	Value.
			$		$
Knives and forks of steel, plated or not, N.O.P	$		318,820		167,175
All other cutlery, N.O.P.	"		496,726		357,603
Guns, rifles including air guns and air rifles (not being toys), muskets, cannons, pistols, revolvers, or other firearms	"		630,449		446,911
Bayonets, swords, fencing foils, and masks	"		4,583		7,680
Needles of any material or kind, N.O.P	"		95,343		69,460
Steel, chrome steel	Cwt.	4,871	21,785	3,057	13,947
Steel plate, universal mill or rolled edge plates of steel over 12″ wide, imported by manufacturers of bridges or of structural work, or for use in car construction		269,118	415,686	265,356	370,650
Steel in bars or sheets to be used exclusively in the manufacture of shovels when imported by the manufacturers of shovels	"	25,227	48,063	17,089	25,022
Rolled iron or steel, or cast steel in bars, bands, hoops, scroll or strip, sheet or plate of any size, thickness or width, galvanized or coated with any material or not, and steel blanks for the manufacture of milling cutters, when of greater value than 3½ cts. per pound	"	74,796	494,585	41,848	268,662
Steel balls adapted for use in bearings of machinery and vehicles	$		13,718		11,474
Steel wool	Cwt.	387	1,584	208	2,025
Tools and implements—					
Adzes, cleavers, hatchets, wedges, sledges, hammers, crowbars, cant-dogs and track tools, picks, mattocks and eyes or poles for the same	$		76,797		47,575
Axes	Doz.	5,730	35,383	4,392	26,597
Saws	$		181,750		73,058
Files and rasps, N.O.P.	"		87,046		76,581
Tools, hand or machine, of all kinds, N.O.P.	"		1,017,391		682,014
Knife blades or blanks, and table forks of iron and steel, in the rough, not handled, filed, ground or otherwise manufactured	"		202		
Manufactures, articles or wares of iron and steel, or of which iron and steel (or either) are the component materials of chief value, N.O.P	"		3,980,631		3,324,920
Totals			51,485,456		33,083,397

Imports of Iron and Steel Goods free of Duty.

Material.		Twelve months ending March, 1908.		Twelve months ending March, 1909.	
		Quantity.	Value.	Quantity.	Value.
			$		$
Anchors for vessels	Cwt.	7,067	24,488	5,914	22,528
Chain, malleable sprocket or link belting	$	.....	185,416	.....	153,893
Cream separators, and steel bowls for	"	.....	448,569	.....	547,990
Cream separators—materials which enter into the construction and form part of when imported by manufacturers of cream separators to be used in the manufacture thereof	"	.....	136,476	.....	212,172
Gas buoys—The following articles and materials, when imported by manufacturers of automatic gas buoys and automatic gas beacons, for use in the manufacture of such buoys and beacons for the Government of Canada or for export, viz., iron or steel tubes over 16″ diameter, flanged and dished steel heads made from boiler plate, over 5 feet in diameter; hardened steel balls, not less than 3″ diameter; acetelyne gas lanterns and parts thereof, and tobin bronze in bars or rods	"	.....	200,054	.....	23,229
Iron or steel rods not less than $\frac{5}{16}$″ diameter for manufacturing of chain	Cwt.	.....	.....	10,740	14,510
Iron or steel, rolled round wire rods, in the coil, not over $\frac{3}{8}$″ diameter, when imported by wire manufacturers for use in making wire in the coil in their own factories	"	197,247	295,122	406,241	538,378
Boiler plate of iron or steel not less than 30″ width, and not less than $\frac{1}{4}$″ thickness, for use exclusively in the manufacture of boilers	"	262,819	460,423	160,273	244,476
Flat galvanized iron or steel sheets	"	281,850	942,880	221,224	697,466
Rolled iron and steel, and cast steel in bars, band, hoop, scroll or strip, sheet or plate of any size, thickness or width, galvanized or coated with any material or not, and steel blanks for the manufacture of milling cutters, when of greater value than 3½ cts. per lb.	"	61,243	441,416	39,000	264,739
Rolled iron or steel sheets in strips, polished or not, 14 gauge and thinner, N.O.P.	"	376,944	960,765	292,219	647,232
Rolled iron or steel, hoop, band, scroll or strip, No. 14 gauge and thinner, galvanized or coated with other metal or not, N.O.P.	"	22,230	47,878	11,775	20,059
Iron tubing for manufacture of extension rods for windows	$	.....	.....	.....	3,441
Iron or steel, beams, sheets or plates, ankles, knees, masts or parts thereof, and cable chains for wooden, iron, steel or composite ships or vessels	Cwt.	173,520	302,351	162,532	257,783
Locomotive and car wheel tires of steel in the rough	"	148,525	341,727	105,882	274,722
Scrap iron and scrap steel, old, and fit only to be remanufactured, being part of or recovered from any vessel wrecked in waters subject to the jurisdiction of Canada	"	200,340	176,518	.....	.....

IRON.—TABLE 20.—*Continued.*

Imports of Iron and Steel Goods free of Duty.

Material.		Twelve months ending March, 1908.		Twelve months ending March, 1909.	
		Quantity.	Value.	Quantity.	Value.
Machinery:—			$		$
Articles of metal as follows, when for use exclusively in mining and metallurgical operations viz., coal cutting machines, except percussion coal cutters ; coal heading machines; coal augers ; rotary coal drills ; core drills ; miners safety lamps and parts thereof, also accessories for cleaning, filling, and testing such lamps ; electric or magnetic machines for separating or concentrating iron ores ; furnaces for the smelting of copper, zinc, and nickel ores ; converting apparatus for metallurgical processes in metals ; copper plates, plated or not ; machinery for extraction of precious metals by the chlorination or cyanide process ; amalgam safes ; automatic ore samplers ; automatic feeders ; retorts ; mercury pumps ; pyrometers ; bullion furnaces ; amalgam cleaners ; blast furnace blowing engines; wrought iron tubing, butt or lap welded, threaded or coupled, or not, over 4″ diameter ; and integral parts of all machinery mentioned in this item	$	.....	1,060,945	....	520,787
Blowers of iron or steel of a class or kind not made in Canada, for use in the smelting of ores, or in the reduction, separation or refining of metals; rotary kilns, revolving roasters and furnaces of metal of a class or kind not made in Canada, designed for roasting ore, mineral rock or clay; furnace slag trucks and slag pots of a class or kind not made in Canada	"	.....	47,687	.....	13,410
Appliances of iron or steel, of a class or kind not made in Canada, and elevators and machinery of floating dredges, when for use exclusively in alluvial gold mining	"	.....	415,930	.....	269,407
Well-drilling, and apparatus of a class or kind not made in Canada for drilling for water, natural gas or oil, and for prospecting for minerals, not to include motive power	"	.....	165,638	....	61,380
Briquette making machines	"	.....	10,130	.....	702
Newspaper printing presses, of not less value by retail than $1,500 each, of a class or kind not made in Canada	No.	90	361,278	60	172,384
Machinery and tools not manufactured in Canada up to the required standard necessary for any factory to be established in Canada for the manufacture of rifles for the Government of Canada	$	.....	5,678	.....	4,938
All materials, or parts in the rough, unfinished, and screws, nuts, bands, and springs to be used in rifles to be manufactured at any such factory for the Government of Canada	"	.....	15,148	.....	14,720
Machinery of every kind, and structural iron and steel for use in the construction and equipment of factories for the manufacture of sugar from beet root	"	.....	25,804	... .	12,317

Mould boards or shares, or plough plates, land sides, and other plate for agricultural implements, when cut to shape from rolled plates of steel, but not moulded, punched, polished or otherwise manufactured	Cwt.	69,851	207,966	60,183	144,288
	$	.....	4,409	.....	2,326
Steel balls adapted for use on bearings on machinery, and vehicles					
Steel, rolled, for saws and straw cutters not tempered, or ground, nor further manufactured than cut to shape without indented edges	Cwt.	18,115	158,379	12,097	96,305
Steel strips, and flat steel wire when imported into Canada by manufacturers of buckthorn and plain strip fencing, for use exclusively in their own factories in the manufacture thereof	"	188	871	28	109
Steel wire, Bessemer soft drawn spring of Nos. 10, 12, and 13 gauge, respectively, and homo steel spring wire of Nos. 11 and 12 gauge, respectively, when imported by manufacturers of wire mattresses, to be used exclusively in their own factories in the manufacture of such articles	"	9,294	24,202	6,421	15,565
Steel, crucible sheet, 11 to 16 gauge, $2\frac{1}{2}$" to 18" wide, for the manufacture of mower and reaper knives when imported by manufacturers thereof for use exclusively in the manufacture of such articles in their own factories	"	11,433	49,779	12,033	50,726
Steel No. 20 gauge and thinner, but not thinner than No. 30 gauge, for the manufacture of corset steels, clock springs, and shoe shanks, imported by manufacturers of such articles for exclusive use in the manufacture of such articles in their own factories	"	208	1,228	.....	5
Steel wire, flat, of 16 gauge or thinner, imported by the manufacturers of crinoline, and corset wires and dress stays, for use exclusively in the manufacture of such articles in their own factories	"	3,765	24,631	4,094	26,495
Steel, No. 12 gauge and thinner, but not thinner than No. 30 gauge, for the manufacture of buckle clasps, bed fasts, furniture casters, and ice-creepers, imported by the manufacturers of such articles, for use exclusively in the manufacture of such articles in their own factories	"	1,520	4,245	1,631	4,385
Steel No. 24 and 17 gauge, in sheets 63" long and from 18" to 32" wide, when imported by the manufacturers of tubular bow sockets for use exclusively in the manufacture of such articles in their own factories	"	2,327	5,832	.....	.....
Steel springs for the manufacture of surgical trusses, when imported by manufacturers of surgical trusses for use exclusively in the manufacture thereof in their own factories	Lbs.	969	706	906	774
Swedish rolled iron, and Swedish rolled steel nail rods, under half an inch in diameter, for the manufacture of horse shoe nails	Cwt.	22,360	44,168	18,520	39,002
	"	1,000	10,465	330	2,233
Steel seamless tubing valued at not less than $3\frac{1}{2}$ cents per pound	$	.....	10,423	.....	7,181
Steel or iron tubes, rolled, not joined or welded, not more than $1\frac{1}{2}$" diameter, N.O.P.	"	.....	655,203	.....	415,068
Seamless steel, or wrought iron boiler tubes, including flues and corrugated tubes for marine boilers	Cwt.	241,520	572,766	231,627	567,236
Barbed fencing wire of iron or steel	Lbs.	14,340	2,765	10,588	1,830
Wire, crucible cast steel, valued at not less than 6 cents per lb	Cwt.	608,039	1,341,416	399,506	858,129
Wire, curved or not, galvanized iron or steel, Nos. 9, 12, and 13 gauge					
Wire, steel, valued at not less than $2\frac{3}{4}$ cents per pound when imported by manufacturers of rope for use exclusively in the manufacture of rope	"	35,460	142,467	22,120	85,714
Totals		.....	10,334,242	.....	7,310,034